

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	3341	(decrease or decreasing or decreased) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:06
2	BRS	L2	21818	(treat or treating or treated or treatment) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:06
3	BRS	L3	20569	(reduce or reducing or reduced or reduction) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:07
4	BRS	L4	759	(minimize or minimizing or minimized) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:08

	Type	L #	Hits	Search Text	DBs	Time Stamp
5	BRS	L5	5995	(strip or stripping or stripped or stripper) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:30
6	BRS	L6	2181	(etch or etching or etched or etchant) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:09
7	BRS	L7	2211	(clean or cleaning or cleaned or cleaner or cleanse or cleansing or cleansed or cleanser) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:09
8	BRS	L8	9871	(remove or removing or removed or remover) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:10

	Type	L #	Hits	Search Text	DBs	Time Stamp
9	BRS	L9	6313	(dissolve or dissolving or dissolved or dissolution) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:10
10	BRS	L10	1367	(inhibit or inhibiting or inhibited or inhibition) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:10
11	BRS	L11	7376	(prevent or preventing or prevented or prevention) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:11
12	BRS	L12	6253	(disperse or dispersing or dispersed or dispersion) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:11

	Type	L #	Hits	Search Text	DBs	Time Stamp
13	BRS	L13	1734	(leach or leaching or leached) with ((iron or "Fe!" or ferrous or ferric) adj3 (sulphide or sulfide) or FeS or "FeS2" or "FeS.sub.2")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:11
14	BRS	L14	70431	11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 110 or 111 or 112 or 113	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:12
15	BRS	L15	408811	TRIS or tris adj3 (hydroxymethyl) adj3 phosphine or (tetrakis adj3 hydroxymethyl adj3 phosphonium) adj3 (sulfate or sulphate or chloride)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:34
16	BRS	L16	166	114 with 115	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:16

	Type	L #	Hits	Search Text	DBs	Time Stamp
17	BRS	L17	15	116 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:44
18	BRS	L18	181100	(134/\$ or 252/\$ or 510/\$).ccls.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:20
19	BRS	L19	238579	THP	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:20
20	BRS	L20	623266	115 or 119	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:20

	Type	L #	Hits	Search Text	DBs	Time Stamp
21	BRS	L21	275	114 with 120	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:20
22	BRS	L22	15	121 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:27
23	BRS	L23	47045	120 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:33
24	BRS	L24	3899	123 and 118	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:30

	Type	L #	Hits	Search Text	DBs	Time Stamp
25	BRS	L25	408811	"TRIS" or tris adj3 (hydroxymethyl) adj3 phosphine or (tetrakis adj3 hydroxymethyl adj3 phosphonium) adj3 (sulfate or sulphate or chloride)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:31
26	BRS	L26	408811	"TRIS!" or tris adj3 (hydroxymethyl) adj3 phosphine or (tetrakis adj3 hydroxymethyl adj3 phosphonium) adj3 (sulfate or sulphate or chloride)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:32
27	BRS	L27	623266	126 or 119	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:32
28	BRS	L28	47045	127 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:34

	Type	L #	Hits	Search Text	DBs	Time Stamp
29	BRS	L29	408814	"TRIS!" or tris adj (hydroxymethyl) adj phosphine or (tetrakis adj hydroxymethyl adj phosphonium) adj (sulfate or sulphate or chloride or THP)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:35
30	BRS	L30	623274	"TRIS!" or tris adj (hydroxymethyl) adj phosphine or THP or trishydroxymethylphosphine or trishydroxymethyl adj phosphine or (tetrakishydroxymethylphos phonium or tetrakishydroxymethyl adj phosphonium) adj (sulfate or sulphate or chloride) or (tetrakis adj hydroxymethyl adj phosphonium) adj (sulfate or sulphate or chloride)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:44
31	BRS	L31	275	130 with 114	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:44
32	BRS	L33	47047	130 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:51

	Type	L #	Hits	Search Text	DBs	Time Stamp
33	BRS	L32	15	l31 with (ammonia or ammonium or amine or alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or "NH3" or "NH.sub.3")	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:04
34	BRS	L34	3900	133 and 118	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:50
35	BRS	L35	214659	130 not "TRIS!"	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:52
36	BRS	L36	623	133 not "TRIS!"	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:54

	Type	L #	Hits	Search Text	DBs	Time Stamp
37	BRS	L37	62	136 and 118	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:52
38	BRS	L38	333	136 not amine	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:55
39	BRS	L39	27	138 and 118	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 15:55
40	BRS	L40	10	135 with (alkyl adj3 amine or dialkyl adj3 amine or alkylene adj3 diamine or cycloalkyl adj3 amine or methyl adj3 amine or cyclo adj3 alkyl adj3 amine or ethyl adj amine or propyl adj amine or butyl adj amine or terbutyl adj amine or cyclopropyl adj amine or cyclobutyl adj amine or cyclopentyl adj amine or cyclohexyl adj amine)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:12

	Type	L #	Hits	Search Text	DBs	Time Stamp
41	BRS	L41	2	mattox-m\$.in.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:12
42	BRS	L42	5	valente-e\$.in.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:12
43	BRS	L43	167	synergy\$.asn.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:13
44	BRS	L45	174	143 or 144	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:13

	Type	L #	Hits	Search Text	DBs	Time Stamp
45	BRS	L46	2	145 and 130	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:13
46	BRS	L44	7	141 or 142	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B; USOCR	2002/10/11 16:13

=> FILE REG

FILE 'REGISTRY' ENTERED AT 12:10:11 ON 11 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 10 OCT 2002 HIGHEST RN 460706-73-4
DICTIONARY FILE UPDATES: 10 OCT 2002 HIGHEST RN 460706-73-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 12:10:16 ON 11 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
the American Chemical Society and is provided to assist you in searching
databases on STN. Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

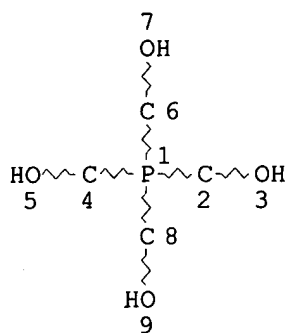
FILE COVERS 1907 - 11 Oct 2002 VOL 137 ISS 16
FILE LAST UPDATED: 10 Oct 2002 (20021010/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE

L22	1 SEA FILE=REGISTRY ABB=ON	124-64-1
L23	1 SEA FILE=REGISTRY ABB=ON	"TETRAKIS (HYDROXYMETHYL) PHOSPHONIUM SULFATE"/CN
L25	1 SEA FILE=REGISTRY ABB=ON	"TRIS (HYDROXYMETHYL) PHOSPHINE"/CN
L26	STR	



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L30 269 SEA FILE=REGISTRY SSS FUL L26
 L31 134 SEA FILE=REGISTRY ABB=ON L30 AND PMS/CI
 L32 135 SEA FILE=REGISTRY ABB=ON L30 NOT L31
 L33 6 SEA FILE=REGISTRY ABB=ON AMMONIA/CN OR METHYLAMINE/CN OR
 ETHYLAMINE/CN OR PROPYLAMINE/CN OR ISOPROPYLAMINE/CN OR
 BUTYLAMINE/CN OR TERTBUTYLAMINE/CN
 L35 1 SEA FILE=REGISTRY ABB=ON "1,2-DIAMINOETHANE"/CN
 L36 1 SEA FILE=REGISTRY ABB=ON "1,2-DIAMINOPROPANE"/CN
 L37 1 SEA FILE=REGISTRY ABB=ON "1,3-DIAMINOPROPANE"/CN
 L38 1 SEA FILE=REGISTRY ABB=ON CYCLOPROPYLAMINE/CN
 L39 1 SEA FILE=REGISTRY ABB=ON CYCLOBUTYLAMINE/CN
 L40 1 SEA FILE=REGISTRY ABB=ON CYCLOPENTYLAMINE/CN
 L41 1 SEA FILE=REGISTRY ABB=ON CYCLOHEXYLAMINE/CN
 L42 1 SEA FILE=REGISTRY ABB=ON T-BUTYLAMINE/CN
 L43 14 SEA FILE=REGISTRY ABB=ON L33 OR (L35 OR L36 OR L37 OR L38 OR
 L39 OR L40 OR L41 OR L42)
 L44 1 SEA FILE=REGISTRY ABB=ON "IRON SULFIDE"/CN
 L45 858 SEA FILE=HCAPLUS ABB=ON L25 OR L22 OR L23
 L46 745 SEA FILE=HCAPLUS ABB=ON L32
 L47 161077 SEA FILE=HCAPLUS ABB=ON L43
 L48 141 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND L47
 L49 17173 SEA FILE=HCAPLUS ABB=ON L44 OR (IRON OR FERROUS OR FERRIC) (W) (SULFIDE OR SULPHIDE) OR FES OR FES2
 L50 0 SEA FILE=HCAPLUS ABB=ON L48 AND L49
 L51 299 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND ?AMINE?
 L52 198 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND (AMMONIA OR NH3?)
 L53 1 SEA FILE=HCAPLUS ABB=ON (L51 OR L52) AND L49
 L54 2 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND L49
 L55 2 SEA FILE=HCAPLUS ABB=ON L50 OR L53 OR L54
 L56 151 SEA FILE=HCAPLUS ABB=ON L31
 L57 0 SEA FILE=HCAPLUS ABB=ON L56 AND L49
 L58 2 SEA FILE=HCAPLUS ABB=ON L55 OR L57
 L59 114 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND ?AMINO?
 L60 1 SEA FILE=HCAPLUS ABB=ON L49 AND L59
 L61 2 SEA FILE=HCAPLUS ABB=ON L58 OR L60

=> D L61 ALL 1-2 HITSTR

L61 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS
 AN 2002:89953 HCAPLUS
 DN 136:153714
 TI Treatment of **iron sulfide** deposits
 IN Fidoe, Stephen David; Talbot, Robert Eric; Jones, Christopher Raymond;
 Gabriel, Robert
 PA Rhodia Consumer Specialties Limited, UK
 SO PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C02F005-14
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 43, 61

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002008127	A1	20020131	WO 2001-GB3139	20010710
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI GB 2000-17675	A	20000720		
OS MARPAT 136:153714				
AB Mixts. of <u>tris(hydroxymethyl)phosphine (THP)</u> or a THP salt with an <u>aminocarboxylic</u> or an <u>aminophosphonic acid</u> chelant act synergistically to inhibit, prevent, reduce, dissolve or disperse <u>iron sulfide</u> deposits, such as <u>scale in water pipelines,</u> <u>petroleum pipelines</u> and <u>oil water emulsions,</u> and papermaking equipment. The treatment soln. contains 0.1-50 wt.% of THP and 0.1-50 wt.% chelant.				
ST	iron sulfide scale removal			
IT	Ceramics			
	(beads; treatment of iron sulfide scale)			
IT	Scale (deposits)			
	(control; treatment of iron sulfide scale)			
IT	Surfactants			
	Water purification			
	(treatment of iron sulfide scale)			
IT	Bentonite, uses			
	Zeolites (synthetic), uses			
	RL: NUU (Other use, unclassified); USES (Uses)			
	(treatment of iron sulfide scale)			
IT	2809-21-4, 1-Hydroxyethane-1,1-diphosphonic acid			
	RL: NUU (Other use, unclassified); USES (Uses)			
	(corrosion inhibitor; treatment of iron sulfide scale)			
IT	50-21-5D, Lactic acid, salts 60-00-4, Ethylene diamine			
	tetraacetic acid, uses 64-18-6D, Formic acid, salts 64-19-7D, Acetic acid, salts 65-85-0D, Benzoic acid, salts 69-72-7D, Salicylic acid, salts 77-92-9D, Citric acid, salts 79-09-4D, Propionic acid, salts 79-10-7D, Acrylic acid, salts 80-59-1D, Tiglic acid, salts 87-69-4D, Tartaric acid, salts 88-99-3D, Phthalic acid, salts 97-65-4D, Itaconic			

acid, salts 103-82-2D, Phenylacetic acid, salts 110-15-6D, Succinic acid, salts 110-16-7D, Maleic acid, salts 110-17-8D, Fumaric acid, salts 111-16-0D, Pimelic acid, salts 123-99-9D, Azelaic acid, salts 124-04-9D, Adipic acid, salts 139-13-9, Nitrilo triacetic acid 141-82-2D, Malonic acid, salts 144-62-7D, Oxalic acid, salts 334-48-5D, Capric acid, salts 498-23-7D, Citraconic acid, salts 499-12-7D, Aconitic acid, salts 503-64-0D, Iso crotonic acid, salts 505-48-6D, Suberic acid, salts 565-63-9D, Angelic acid, salts 2767-80-8, Tris(hydroxymethyl)phosphine 2767-80-8D, Tris(hydroxymethyl)phosphine, salts 3724-65-0D, Crotonic acid, salts 6915-15-7D, Malic acid, salts 7440-09-7D, Potassium, **amino** phosphonate derivs. 7440-17-7D, Rubidium, **amino** phosphonate derivs. 7440-23-5D, Sodium, **amino** phosphonate derivs. 7440-46-2D, Cesium, **amino** phosphonate derivs. 7631-86-9, Silica, uses 7757-82-6, Sodium sulfate, uses 14798-03-9, Ammonium ion, uses 14807-96-6, Talc, uses 15827-60-8, **Diethylenetriaminepentakis** (methylenephosphonic acid) 22036-78-8, Briquest 543 55953-80-5 394737-38-3 394737-39-4
 RL: NUU (Other use, unclassified); USES (Uses)

(treatment of **iron sulfide** scale)
 IT 1314-87-0, Lead sulfide 1314-98-3, Zinc sulfide, processes 11126-12-8, **Iron sulfide**

RL: REM (Removal or disposal); PROC (Process)
 (treatment of **iron sulfide** scale)

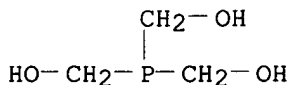
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Carlson, R; GB 1203268 A 1970
- (2) Carlson, R; US 3578708 A 1971 HCAPLUS
- (3) Jones, C; WO 0021892 A 2000 HCAPLUS

IT 2767-80-8, Tris(hydroxymethyl)phosphine 2767-80-8D, Tris(hydroxymethyl)phosphine, salts
 RL: NUU (Other use, unclassified); USES (Uses)
 (treatment of **iron sulfide** scale)

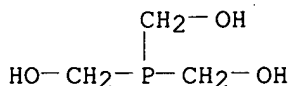
RN 2767-80-8 HCAPLUS

CN Methanol, phosphinidynetris- (9CI) (CA INDEX NAME)



RN 2767-80-8 HCAPLUS

CN Methanol, phosphinidynetris- (9CI) (CA INDEX NAME)



IT 11126-12-8, **Iron sulfide**

RL: REM (Removal or disposal); PROC (Process)
 (treatment of **iron sulfide** scale)

RN 11126-12-8 HCAPLUS

CN Iron sulfide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L61 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

AN 2000:260187 HCAPLUS
 DN 132:283871
 TI Leaching divalent metal salts
 IN Odell, Barbara; Jones, Christopher Raymond; Talbot, Robert Eric
 PA Albright & Wilson UK Limited, UK
 SO PCT Int. Appl., 17 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C02F005-14
 CC 61-6 (Water)
 Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000021892	A1	20000420	WO 1999-GB3352	19991008
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9962174	A1	20000501	AU 1999-62174	19991008
	EP 1133450	A1	20010919	EP 1999-949196	19991008
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2001001504	A	20010531	NO 2001-1504	20010323
PRAI	GB 1998-22263	A	19981014		
	GB 1998-27177	A	19981211		
	WO 1999-GB3352	W	19991008		
AB	The compns. for leaching deposits of divalent metal salts such as ferrous sulfide comprise: (A) a tetrakis (hydroxymethyl)phosphonium salt; (B) an ammonium salt in a ratio of A:B of (0.01-100):1; and (c) sufficient of an acid, which is substantially unreactive with tetrakis(hydroxymethyl)phosphonium ion or ammonium ion to maintain the pH .ltoreq.4.5. The compns. may be solns. or particulate solids. The method is esp. applicable to ferrous sulfide deposits in oil wells and adjacent strata.				
ST	ferrous sulfide removal leaching				
IT	Geothermal wells				
	Oil wells				
	Wells				
	(leaching divalent metal salts such as ferrous sulfide from wells)				
IT	Carboxylic acids, uses				
	RL: NUU (Other use, unclassified); USES (Uses)				
	(leaching divalent metal salts such as ferrous sulfide from wells)				
IT	57-10-3, Hexadecanoic acid, uses 57-11-4, Octadecanoic acid, uses 60-33-3, Linoleic acid, uses 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 76-03-9, Tri chloro acetic acid, uses 110-15-6, Butanedioic acid, uses 110-16-7, Maleic acid, uses 110-94-1, Glutaric acid 111-16-0, Heptanedioic acid 112-80-1, 9-Octadecenoic acid (9Z)-, uses 123-99-9, Nonanedioic acid, uses 124-04-9, Hexanedioic acid, uses 124-64-1, Tetrakis (hydroxymethyl)phosphonium chloride 505-48-6, Octanedioic acid 540-69-2, Ammonium formate 631-61-8, Ammonium acetate 5940-69-2, Tetrakis (hydroxymethyl)phosphonium bromide				

7580-37-2, Tetrakis (hydroxymethyl)phosphonium acetate
 7646-88-0, Ammonium tri chloro acetate 7647-01-0, Hydrochloric acid,
 uses 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses
 7782-99-2, Sulfurous acid, uses 7783-20-2, Ammonium sulfate, uses
 10035-10-6, Hydrogen bromide, uses 10043-35-3, Boric acid, uses
 10196-04-0, Ammonium sulfite 11128-98-6, Ammonium borate 12124-97-9,
 Ammonium bromide 12125-02-9, Ammonium chloride, uses 13446-12-3
 13598-36-2, Phosphorous acid, uses 14798-03-9, Ammonium, uses
 22031-17-0, Tetrakis (hydroxymethyl)phosphonium phosphate
 24655-84-3 25151-36-4, Tetrakis
 (hydroxymethyl)phosphonium formate 55566-30-8, Tetrakis
 (hydroxymethyl)phosphonium sulfate 110499-12-2
 263747-72-4, uses 263747-73-5 263747-74-6

RL: NUU (Other use, unclassified); USES (Uses)
 (leaching divalent metal salts such as **ferrous**
sulfide from wells)

IT 1317-37-9, **Ferrous sulfide**

RL: REM (Removal or disposal); PROC (Process)
 (leaching divalent metal salts such as **ferrous**
sulfide from wells)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

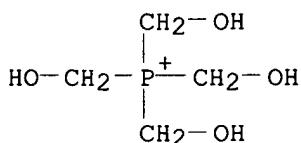
- (1) Albright & Wilson; GB 2145708 A 1985 HCAPLUS
- (2) Albright & Wilson; GB 2257043 A 1993 HCAPLUS
- (3) Albright & Wilson; GB 2271787 A 1994 HCAPLUS
- (4) Albright & Wilson; EP 0709518 A 1996 HCAPLUS
- (5) Hooker Chemical; GB 1065547 A
- (6) Hooker Chemical; GB 1251032 A 1971 HCAPLUS

IT 124-64-1, Tetrakis (hydroxymethyl)phosphonium chloride
 5940-69-2, Tetrakis (hydroxymethyl)phosphonium bromide
 7580-37-2, Tetrakis (hydroxymethyl)phosphonium acetate
 22031-17-0, Tetrakis (hydroxymethyl)phosphonium phosphate
 24655-84-3 25151-36-4, Tetrakis
 (hydroxymethyl)phosphonium formate 55566-30-8, Tetrakis
 (hydroxymethyl)phosphonium sulfate 110499-12-2
 263747-72-4, uses 263747-73-5 263747-74-6

RL: NUU (Other use, unclassified); USES (Uses)
 (leaching divalent metal salts such as **ferrous**
sulfide from wells)

RN 124-64-1 HCAPLUS

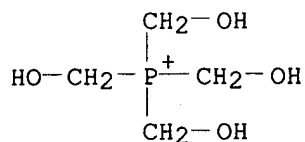
CN Phosphonium, tetrakis(hydroxymethyl)-, chloride (8CI, 9CI) (CA INDEX
 NAME)



● Cl⁻

RN 5940-69-2 HCAPLUS

CN Phosphonium, tetrakis(hydroxymethyl)-, bromide (8CI, 9CI) (CA INDEX NAME)

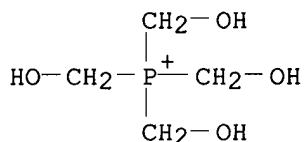


● Br⁻

RN 7580-37-2 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, acetate (salt) (8CI, 9CI) (CA INDEX NAME)

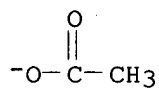
CM 1

CRN 24655-84-3
CMF C4 H12 O4 P



CM 2

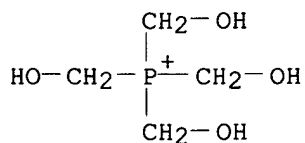
CRN 71-50-1
CMF C2 H3 O2



RN 22031-17-0 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, phosphate (3:1) (salt) (8CI, 9CI) (CA INDEX NAME)

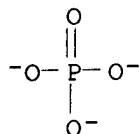
CM 1

CRN 24655-84-3
CMF C4 H12 O4 P

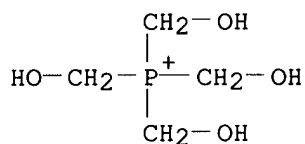


CM 2

CRN 14265-44-2
CMF O4 P



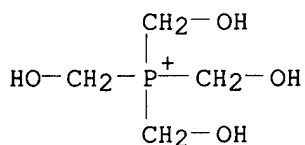
RN 24655-84-3 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)- (8CI, 9CI) (CA INDEX NAME)



RN 25151-36-4 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, formate (salt) (8CI, 9CI) (CA INDEX NAME)

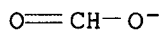
CM 1

CRN 24655-84-3
CMF C4 H12 O4 P



CM 2

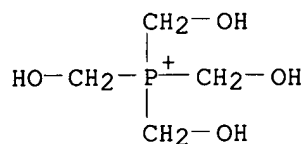
CRN 71-47-6
CMF C H O2



RN 55566-30-8 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1) (salt) (9CI) (CA INDEX NAME)

CM 1

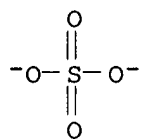
CRN 24655-84-3
CMF C4 H12 O4 P



CM 2

CRN 14808-79-8

CMF 04 S



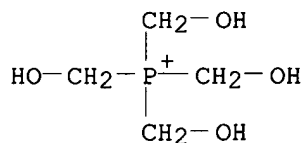
RN 110499-12-2 HCAPLUS

CN Phosphonium, tetrakis(hydroxymethyl)-, phosphite (3:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 24655-84-3

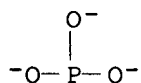
CMF C4 H12 O4 P



CM 2

CRN 14901-63-4

CMF 03 P



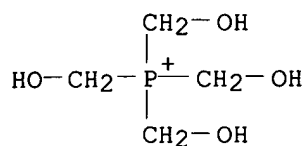
RN 263747-72-4 HCAPLUS

CN Phosphonium, tetrakis(hydroxymethyl)-, salt with trichloroacetic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

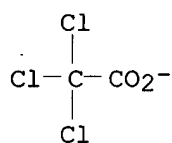
CRN 24655-84-3

CMF C4 H12 O4 P



CM 2

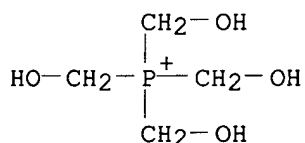
CRN 14357-05-2
CMF C2 C13 O2



RN 263747-73-5 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, salt with boric acid (H3BO3) (3:1)
(9CI) (CA INDEX NAME)

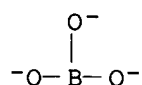
CM 1

CRN 24655-84-3
CMF C4 H12 O4 P



CM 2

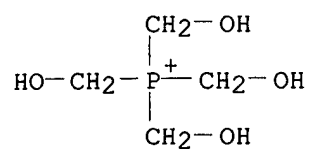
CRN 14213-97-9
CMF B O3



RN 263747-74-6 HCAPLUS
CN Phosphonium, tetrakis(hydroxymethyl)-, sulfite (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 24655-84-3
CMF C4 H12 O4 P



CM 2

CRN 14265-45-3

CMF 03 S

